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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,592	07/23/2003	Thomas Kammerdiener	66376-328-7	7533
25269	7590	04/23/2004	EXAMINER	
DYKEMA GOSSETT PLLC FRANKLIN SQUARE, THIRD FLOOR WEST 1300 I STREET, NW WASHINGTON, DC 20005			CHANG, CHING	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,592	Applicant(s) KAMMERDIENER ET AL.	
	Examiner Ching Chang	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 28-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. ***Claim 28 is rejected under 35 U.S.C. 102(b) as anticipated by Stutzenberger et al. (US Patent No. 5,154,143).***

Stutzenberger discloses a method of operating an internal combustion engine (1) with a variable valve train for a cam-actuated lifting valve (11, 12) (See Fig. 1), including the steps of hydraulically activating the lifting valve and providing an additional lift during a mechanical lifting phase performed by the cam (6) (See Col. 4, line 45 through Col. 5. line11).

3. ***Claim 29 is rejected under 35 U.S.C. 102(b) as anticipated by Fujiyoshi et al. (US Patent No. 4,873,949).***

Fujiyoshi discloses a method of operating an internal combustion engine (See Fig. 1) with a valve train for a cam-actuated lifting valve (5)(See Col. 2, line 62 through Col. 3, line 9), including the step of hydraulically reopening the lifting valve at least once after a mechanical lifting phase performed by the cam (9) has ceased (See Col. 6. line 16 through Col. 10, line 62).

4. ***Claim 30 is rejected under 35 U.S.C. 102(b) as anticipated by both Stutzenberger et al. (US Patent No. 5,154,143) and Rembold et al. (US Patent No. 5,113,811)***

Both Stutzenberger and Rembold, respectively, disclose a method of operating an internal combustion engine with a valve train for a cam-actuated lifting valve (of cylinder a through cylinder d in US '143) (of cylinder I through cylinder IV in US '811), including the steps of alternately mechanically and hydraulically determining lifts of subsequent charge exchange processes (See Fig. 2; and Col. 5, line 48 through Col. 6, line 47 of US '143)(also See Fig. 2; and Col. 5, line 29 through Col. 7, line 2 of US '811).

5. ***Claim 28 is rejected under 35 U.S.C. 102(b) as anticipated by Kruger (US Patent No. 5,193,496).***

Kruger a method of operating an internal combustion engine with a variable valve train for a cam-actuated lifting valve (9)(37), including the steps of hydraulically

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activating the lifting valve and providing an additional lift during a mechanical lifting phase performed by the cam (3, 4)(32, 33) (See Col. 3, line 12 through Col. 4, line 66).

6. Claim 30 is rejected under 35 U.S.C. 102(b) as anticipated by Kruger (US Patent No. 5,193,496)

Kruger discloses a method of operating an internal combustion engine with a valve train for a cam-actuated lifting valve (6), including the steps of alternatingly mechanically and hydraulically determining lifts of subsequent charge exchange processes (See Col. 3, line 12 through Col. 5, line 68).

7. Claim 28 is rejected under 35 U.S.C. 102(e) as anticipated by Herbst (US Patent No. 6,293,239).

Herbst a method of operating an internal combustion engine with a variable valve train for a cam-actuated lifting valve (8), including the steps of hydraulically activating the lifting valve and providing an additional lift during a mechanical lifting phase performed by the cam (2) (See Col. 3, line 37 through Col. 4, line 50).

8. Claim 30 is rejected under 35 U.S.C. 102(e) as anticipated by Herbst (US Patent No. 6,293,239)

Herbst discloses a method of operating an internal combustion engine with a valve train for a cam-actuated lifting valve (8), including the steps of alternatingly

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mechanically and hydraulically determining lifts of subsequent charge exchange processes (See Fig. 5).

9. Claims 28-29 are rejected under 35 U.S.C. 102(b) as anticipated by Watanabe (US Patent No. 5,005,540).

Watanabe discloses methods for operating an internal combustion engine (1) with a variable valve train (4) for a cam-actuated lifting valve (3), wherein the lifting valve will be hydraulically activated and given an additional lift during a mechanical lifting phase performed by the cam (10) (See Col. 2, line 46 through Col. 3, line 9), wherein the lifting valve will be re-opened hydraulically at least once after a mechanical lifting phase performed by the cam has come to an end (See Col. 4, line 5 through line 28; See Col. 4, line 50 through line 58).

10. Claim 30 is rejected under 35 U.S.C. 102(e) as anticipated by Albanello et al. (US Patent No. 6,053,136).

Albanello discloses a method for operating an internal combustion engine (3) with a valve train (9, 10) for a cam-actuated lifting valve (1), wherein lifts of sequent charge exchange processes are alternatingly determined mechanically and hydraulically (See Col. 2, line 63 through Col. 4, line 25).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (703)306-3478. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703)308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patent Examiner



Ching Chang



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700